GROUNDWATER PROTECTION PROGRAM

Meeting Minutes Cover Sheet

Please find attached the Open Meeting Minutes from the Groundwater Protection Program of August 5, 2002.

If you have any comments or changes to these minutes, please reply to this email and your comments will be incorporated into the next meeting minutes.

GROUNDWATER PROTECTION PROGRAM

Meeting Minutes

SUBJECT **GROUNDWATER PROTECTION PROGRAM MEETING - AUGUST 5, 2002**

TO Distribution

FROM Dick Wilde, Groundwater Protection Program Manager

DATE August 28, 2002

ATTENDEES
See Attached List

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NEXT GROUNDWATER PROTECTION PROGRAM OPEN MEETING:

Next Meeting: Tuesday, September 3, 2002 – 1-3 p.m.
Location: 1200 Jadwin, Conference Room 1C1
Local Call-In Number: (509) 376-7411
Toll Free Call-In Number: (800) 664-0771

MEETING MINUTES

A Groundwater Protection Program (GPP) Open Meeting was held on August 5, 2002, in Richland, Washington, in Conference Room 1C1 of 1200 Jadwin Avenue.

Welcome by Dick Wilde followed by an around-the-table introduction of attendees.

PROGRAM REPORT:

General (John Morse/Bruce Ford)

The Project Management Plan is going well. We are working with the Washington State Department of Ecology (Ecology) and the Environmental Protection Agency (EPA) to finish writing the Groundwater Protection Strategy; the report draft will be finished by the end of August. Some parts of the draft have been sent out for comments. The overall strategy is to make significant progress for the next few years on groundwater and plans for the site.

Highlights of Initiative #6 include putting together a program of high-risk control. The key elements include making sure high-risk areas on site are in concert with others by looking at developing early actions

at U-Plant and other operable units (OUs). We are in concert with the Office of River Protection (ORP) and tank farms to eliminate potential berm run-off, eliminate the septic system, and eventually change water lines contributing to the vadose zone. For the pump-and-treat operations, initial focus will be on carbon tetrachloride remedial approach, N-Springs strontium and chromium plumes, and other issues. The initiative also includes shrinking the footprint significantly by 2012. EPA and Ecology interpreted site monitoring *Resource Conservation and Recovery Act of 1976* (RCRA)/*Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (*CERCLA) regulations. By the end of the fiscal year, plans are to integrate the site monitoring needs network and install monitoring wells. For waste sites outside the Central Plateau, we will move forward on B Pond, Gable Mountain, and the solid/central waste landfill/BC Control Area. The overall baseline addresses chromium plumes along the river and essentially shrinking Central Plateau hazards to 75 square miles by 2012.

<u>200 Area</u> (Bruce Ford/Roy Bauer)
There are three things to mention regarding the 200 Areas. The Central Plateau Ecological evaluation report is out for review. We've received comments, except one set from Ecology. I want to thank everyone for his or her input; we now have a valuable foundation. Dispositioning will take place over the next few months.

Preliminary results from Z-11 borehole drilling during April and May showed soil samples contain traces of americium and plutonium. We backfilled, dug another ditch (6-9 ft of soil), and used a multiple-step process. We started with ground penetrating radar (GPR), then punched GeoProbe rods and used logging instruments. The borehole results showed radiological contaminants lower than expected, approximately 12 percent of prior sampling (1979). We found traces of nitrate and some other tentatively identified compounds. Remedial decisions for the ditch now focus on transuranic (TRU) concentration.

In September 2000, during work on the Z-18 trench (one of the most contaminated areas at Hanford), the subcontractor proposed using gross gamma/passive neutron detector. The passive neutron detector initially received a negative response from the scientific community, but it worked well on the Z-18 trench, and the results corroborated well with previous results. A cost benefit analysis concluded that driving a large-diameter casing using a small-diameter system produced satisfying results. Gross gamma detectors and passive neutron detectors produced the same level of information and saved time.

The benefit of this technique is we now have a new tool to add to the toolbox that greatly reduces costs and focuses on TRU contamination. It will really help in post-rod sampling to the confirm footprint of contamination.

<u>Carbon Tetrachloride</u> (Virginia Rohay/Bruce Ford)
We are looking for the carbon tetrachloride plume in the vadose zone at known discharge sites, as well as at other potential carbon tetrachloride release sites, such as pipelines to known discharge sites. Sampling plan for Phase I calls for using drive point technologies like GeoProbe. We are collecting and analyzing soil vapor samples as part of a broad exploration in the shallow vadose zone. We will use the results to focus our investigation in the deeper vadose zone. We started the GeoProbe work this morning and expect to have preliminary results next month.

What we're looking at is planning three phases of investigation. First, we'll perform a shallow investigation at known and potential carbon tetrachloride release sites this year. Then, we'll go back and perform a deeper investigation at the sites where we find carbon tetrachloride. In addition, we'll perform a

site investigation next year at the known release sites. We plan to drill boreholes at Z-1A Tile Field and the Z-9 trench, probably during the spring of next year.

QUESTION: How many GeoProbe holes will you need? Around 100?

ANSWER: A lot. I'll get better estimate for you.

QUESTION: Are you putting the GeoProbes directly into trenches? If so, how deep?

ANSWER: We plan to push to 25 feet using the GeoProbe. The cone penetrometer (CPT) will then be used to attempt to go deeper at some locations. The drive point investigations will be outside of any of the trenches.

QUESTION: What detection limit will be used?

ANSWER: Field screening methods will be used at 1 part per million (ppm) of carbon tetrachloride.

QUESTION: If you get a hit, how are you going to flag the results?

ANSWER: We'll see what pattern emerges and compare the results with what we've seen in past years. Then, we'll put together a pattern of total results. We plan to conduct a data quality objective (DQO) process for the step 2 investigation at the beginning of the next fiscal year.

QUESTION: Why a GeoProbe depth to 25 feet?

ANSWER: 25 feet provides a broad exploration of a large number of sites and is deeper than the pipelines, we'll be able to see if they leaked.

QUESTION: Continuous sample?

ANSWER: We will push the probe to discrete depths and pull the samples at those depths. We're doing the GeoProbe right now. We'll follow up later this summer with a deeper cone penetrometer investigation around the disposal sites.

Pump-and-Treats/Soil Vapor Extraction System (Jane Borghese/Craig Swanson)
Concentrations are low due to high river stage at the HR-3 and KR-4 pump-and-treats. Vapor extraction system at PW-1 has been moved and is in operation. In-Situ Redox Manipulation (ISRM) is still extracting from 10 wells; re-injection in the center wells (area of treatability testing) is planned for August.

QUESTION: Everything is on schedule?

ANSWER: Yes.

Upcoming drilling is planned for two RCRA and two CERCLA wells to be installed by December 30, 2002. One of the RCRA wells is at UP-1 will support technetium-99 and uranium monitoring, and the other at ZP-1 will monitor carbon tetrachloride.

A DOW is being prepared for these wells and adding two RCRA wells around the TX-TY tank farms.

Water Leak at U1/U2 Waste Site (General Discussion)
About two weeks ago, there was a water line leak approximately 100 yards east of the U1/U2 waste site. The leak was at the joint between a 12- and 20-inch pipe connection where the lead packing failed. These water lines are 50-60 years old and ultimately will wear out if they are not replaced. The leak was noticed on July 24, 2002, about 11:15 p.m. There were crews working on it within 30 minutes, and they worked on it until the next morning. It's estimated that approximately 200,000 gallons leaked into the waste site, but there is no information yet on how far it has spread. This type of event validates the need to implement Initiative #6, which includes plans to eliminate recharge surface conditions that push contaminants to groundwater (berms, run-off, etc.), decontamination and decommissioning of abandoned wells, and other water issues that could cause future leaks like this one. We have been trying to replace water lines, but this has always fallen below the funding line, never a high enough priority.

COMMENT: (W. Riggsbee) We had to respond to U1/U2 when it occurred. All that U16 crib water was purged, flooded, and has probably migrated.

(D.Wilde): So what's the impact? We need to know how far it has spread and if it will impact the plume. How will we monitor this?

QUESTION: Has anything shown up in the groundwater?

ANSWER: Groundwater monitoring hasn't been done yet.

COMMENT: (M. Thompson) Groundwater monitoring wells aren't a good leak-detection mechanism.

COMMENT: U1/U2 is the first impact, but this issue triggered a major response.

COMMENT: If it has gone through some existing cribs, it definitely may leach into the groundwater. Ecology will be looking at this.

We have some photos associated with the leak (hands out photographs).

Around-the-Room Project Updates (All Attendees)
Ecology has a groundwater team that meets the third Thursday of every month at 1:30 p.m. Oregon participates, depending upon the subject, as well as stakeholders and tribal governments. We usually discuss groundwater and vadose zone issues and Ecology concerns.

COMMENT: Add the Ecology meeting to the calendar.

Sampling at Tank Farm, TX107, 96 feet pulling samples for characterization effort. Interim measures around tank farms. Last week we completed testing at tank farms at 200 East; any water going into tank farms has been tested and, if found to be contaminated, capped.

SSX Tank Farm update; when we fixed the water leak, we had to drain the hydrant and put the water on the edge outside the berm. The berm was only 6 inches high, so when someone moved the barricade, water leaked into the tank farm, wetting an area of about 15 by 20 feet.

QUESTION: Virginia, what are you doing for detection limits? For a zero detect, do you call it zero?

ANSWER: We'll call it less than 1 (<1) ppmv; the detection limit is 1 ppmv.

The activity this year is field screening to find areas that require deeper investigation.

We've been working with the S&T team to provide input into B/BX/BY field investigation report. We've wrapped up field investigations and experiments to provide a draft report including conclusions and an appendix. We are pulling together a draft of the appendix material today to be submitted next week. Pretty good work came out of it; similar results found at S/ST Tank Farm. We expect more general statements. We utilized results from the vadose transport field study, pulling everything together. Field tests for this year at a clastic dike site are underway. The second injection of tracers fieldwork is scheduled to be done by the end of August. We've been working to tie in the update of roadmap with strategic initiatives that have been part of the management plan. We plan to release the roadmap to DOE this week.

QUESTION: Is a prioritization exercise included in the roadmap? Will it include the results of the workshop and a look at acceleration plan initiatives?

ANSWER: Yes, the roadmap includes workshop, field investigation reports, and initiatives to accelerate cleanup. We tried to capture all the projects, but we're not sure what's been awarded in 2002. We know which Pacific Northwest National Laboratory (PNNL) projects have been awarded to date and they are already roadmapped and identified. I think the roadmap is more focused and directed towards initiatives currently going on.

The external groundwater protection website was finished last week, and the screening will be done this week.

Regarding the System Assessment Capability (SAC), the three-dimensional groundwater model has been inserted and the inventory issues fixed. We finished rerun of the initial assessment and drafted a document to DOE to be released to the public by the end of the fiscal year. We made changes to solvers in groundwater model; it is a time hog in running assessments. We are working to make the system more efficient; we've purchased more computers and changed the code to run in transient mode/steady state. We can now run 1,000- and 10,000-year assessments in three days, where it used to take five to eight weeks. Now we can run longer assessments and more realizations. We're excited about the changes and improvements we've made.

QUESTION: Will the report be out by the end of this month?

ANSWER: It will be out by the end of the fiscal year.

QUESTION: Rev. 0 had problem in history matching. Has that been resolved?

ANSWER: The problem with history matching tritium in groundwater was greatly improved with the 3-dimensional groundwater model.

QUESTION: May I see a demonstration? Can we schedule a meeting?

ANSWER: We can have a demonstration during the next program meeting.

Groundwater Protection Program Master Schedules (Dick Wilde)
There will be 11 schedules that make up the master schedules to form the basis for out-year planning and budget requests. The format is the same as last year and is the one that DOE and the Stakeholders reviewed and commented on. The first good draft will be issued by the end of August. We plan to release the master schedule for general use by the end of September. Expect to look at the master schedules in early September or sooner; I will be soliciting your comments to help make it a better document.

QUESTION: Is it DWP information?

ANSWER: Yes, but its more than just DWP; it's the first real look at whole picture, with all the key assumptions included and is closer to the long-range plan.

Expert Panel (John Morse)
Things are moving on expert panel replacements. A letter containing a site-wide view of cleanup and closure went out last week. If you haven't received a copy, let me know and I'll send you one. Basically, the letter identifies six candidates to be on the panel. These are proposed members of panel, and I think you'll agree they are an excellent team. We plan to obtain comments in a few weeks, then set the panel up to be in place by beginning of the next fiscal year.

QUESTION: Did all agreed to serve?

ANSWER: Yes.

COMMENT: I need a copy of the letter

RESPONSE: I'll make copies after meeting and fax one to you.

UPCOMING EVENTS:
Due to the upcoming holiday, the September Open Meeting will be held September 3, 2002. Also, it will be in a different location because this conference room is booked that day. We'll send out a notice where the meeting will be held.

NOTES:
Groundwater Protection Program Web Site location: http://www.bhi-erc.com/vadose

If you have questions or comments, please contact Barbara Howard (509-373-3871), Alison Bryan (509-373-4456), or Shelley Switzer (509) 373-3847.

ATTACHMENTS:
1) Groundwater Protection Program Five Month Look Ahead Calendar

ATTENDEES:

Jane Borghese – FH
Bob Bryce – PNNL
Carl Connell – FH
Bruce Ford – FH
Dib Goswami – Ecology
Stuart Harris – CTUIR
Edye Jenkins – GPP
Sandra Lilligren – Nez Perce (by phone)
Doug Maddox – DOE-HQ (by phone)
Fred Mann – CHG
Wayne Martin – PNNL
John Morse – DOE-RL
Ted Repasky – CTUIR
Wade Riggsbee – Yakama Nation
Virginia Rohay – FH
Gordon Rogers – HAB
Sue Safford – Oregon Office of Energy (by phone)
Tom Stoops – Oregon Office of Energy (by phone)
Craig Swanson – FH
Shelley Switzer – FH
K. Michael Thompson – DOE-RL
Lisa Trichel – DOE-HQ (by phone)
Dick Wilde – FH
Robert Yasek – DOE/ORP

GROUNDWATER PROTECTION PROGRAM CALENDAR

August 2002 to December 2002

FIVE-MONTH LOOK AHEAD CALENDAR

August 13	Information Session with the Nez Perce Tribe (1-4 p.m., Lapwai, ID)
September 5-6	HAB Meeting (Radisson Hotel, Seattle, WA)
September 9	Groundwater Protection Program Open Meeting (1-3 p.m., Richland, WA)
October 7	Groundwater Protection Program Open Meeting (1-3 p.m., Richland, WA)
November 4	Groundwater Protection Program Open Meeting (1-3 p.m., Richland, WA)
November 7-8	HAB Meeting (Tri-Cities, WA)
December 2	Groundwater Protection Program Open Meeting (1-3 p.m., Richland, WA)
December 5-6	HAB Meeting (Radisson Hotel, Portland, OR)